PLUMBOGUMMITE FROM PÁTKA, VELENCE MTS., HUNGARY: A NEW MINERAL FOR HUNGARY

ZAJZON, N. & SZENTPÉTERI, K. (Eötvös L. University, Dept. of Mineralogy, Budapest, Hungary)
E-mail: nzajzon@hotmail.com

Plumbogummite, a new mineral for Hungary occurred in one of the samples which were collected in 1996 from the oxidation zone of Szűzvár mine, Pátka, Velence Mountains.

The new phase appeared as a crust in fissures of the leached vuggy textured quartz dike, associated with galena, fluorite, pyromorphite, cerussite. Stereomicroscope showed the mineral as a white-coloured powder mass. At some parts of the sample the surface is covered by a colourless microcrystallized mass composed of submicroscopic crystal needles.

According to SEM images the phase appears to be intergrown with pyromorphite. Distinct single crystals exhibit pseudo-octahedral, isometric habit. They are of the size of about 30–50 μm. Twinned crystals also occurred (ZAJZON *et al.*, 2000).

We tried to separate plumbogummite from pyromorphite by using different methods. The separation based on different densities failed because of the tight intergrowth of the two phases. Therefore, measurements that require monomineralic separations could not be carried out on the new phase.

X-ray powder diffraction confirmed the presence of plumbogummite in the powder mixture of pyromorphite and plumbogummite.

Wavelength and energy dispersive X-ray microanalyses revealed that the newly appeared phase is plumbogummite ($Pb_{1.08}Ca_{0.02}Al_{2.93}[PO_4|(PO_3(OH))_{0.86}|(OH)_{6.78}]$).

Textural patterns in optical and electron microscopes showed that plumbogummite appears to have been inter- and overgrown on pyromorphite, and/or replacing pyromorphite as an alteration product.

The authors express special thanks for Dr. Géza Nagy (HAS) for the WDX analytical data.

Reference

ZAJZON, N., VÁCZI, T. & WEISZBURG, T. G. (2000). Acta Miner. Petr. (Szeged), 41, Suppl.: 121